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State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

JOHN R. BAZA
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April 22, 2014

Chris Kaiser
Kennecott Utah Copper LLC
4700 Daybreak Parkway
South Jordan, Utah 84095

Subject: Initial Review of Response to Division Directive, Kennecott Barneys Canyon Mining, Barneys Canyon Mine, M/035/0009, Salt Lake County, Utah

Dear Mr. Kaiser:

The Division of Oil, Gas and Mining has completed a review of the referenced response to the Division's Directive issued April 16, 2014. The response was received April 17, 2014. The attached comments need to be addressed.

Please submit your response to this review by April 30, 2014, and please submit cleanup plans for segments 2-4 by May 15, 2015.

The approval or acceptance of this response to the Division Directive does not relieve Kennecott Barneys Canyon Mining from its responsibility to comply with the applicable statutes, rules, regulations, and ordinances of all local, state and federal agencies with jurisdiction over any aspect of the mining operations.

The Division will suspend further review of the response to the Division Directive until your response to this letter is received. If you have any questions in this regard please contact me at 801-538-5261 or Leslie Heppler at 801-538-5257. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb

Attachment: Review

cc: DEQ - dbacon@utah.gov, hmillican@utah.gov, bhamos@utah.gov, dhall@utah.gov, dallison@utah.gov,
EPA - fiedler.kerri@epa.gov

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**Initial Review of Response to Division Directive
Kennecott Barneys Canyon Mining
Barneys Canyon Mine
M/035/0009
April 22, 2014**

General Comments:

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
1		The Division requires that Kennecott Barneys Canyon implement a planned preshift inspection of the leach pads, until such time as erosional issues have been satisfactorily addressed. Please submit an amendment to the Notice of Intention with a proposed schedule, as per rules R647-4-107.3 and 107.4.	lah	

R647-4-105 - Maps, Drawings & Photographs

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
2	Detail sheet omission	Provide a detail sheet with sections illustrating the construction of the required channel, including dimensions, riprap sizing, filter bed, and construction methods.	mpb	

R647-4-106 - Operation Plan

106.8 - Depth to groundwater, extent of overburden, geologic setting

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
3	Omission	Please provide data from other groundwater wells in the area. Include geologic log.	lah	

R647-4-109 - Impact Assessment

109.1 – Projected impacts to surface & groundwater systems

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
4	Cover letter Page 2	Is the downstream limit of contamination defined?	pnb	
5	Cover letter Page 3	Include findings of well samples.	pnb	

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
6	Map 1 & page 5-1 bullet 9, Page 5-2 para 2	The Division objects to the utilization of BC-05 for a placement of cleanup and disposal material. It was noted in the April 9, 2014, site inspection that sediment control structure(s) around the pad were already up to full design capacity. BC-05 might be considered as a disposal area after the capacity has been restored and the Division has inspected the site. Until BC-05 has been returned to full capacity, BC-03 needs to be used as the disposal site.	lah	
7	Page 5-2, para 2	Trucks must not be overloaded above the height of the bed sidewalls	lah	
8	Map 1	Submit groundwater sample analyses on a monthly basis, versus the quarterly basis, until impacts to the ground water have been fully studied for all wells north of the BC-01 leach pad. Analyses must be done according to standards of the Division of Environmental Response and Remediation and continue for one year after the cleanup has been completed unless results prove additional monthly testing is warranted.	lah	
9	Omission	Propose a ground water monitoring location in segment 3. Include specifics of the well construction details and monitoring protocol. Additional monitoring locations might be warranted dependent upon results.	lah	
10	Page 4-2 Para 2	Submit calibration and manufacturer "standards" protocol documentation for all XRF units used on site, as recommended by the manufacturer's specifications.	lah	
11	Page 2-1 Para 4	Sample depth will continue until EPA unrestricted levels are documented (below 500mg/kg for Pb and 50mg/kg for As).	lah	
12	Page 2-1 Para 4	Sample subsoils? (not clear here)	pnb	
13	Map 5-2	The haul route needs to continue up to BC-03 (see comment 6 above).	lah	
14	Page 5-5 Para 2	Re-sample the West Jordan property after the cleanup on Kennecott land once the sediment basins show low arsenic.	pnb	
15	Pg. 5-5 & Figure 5-1 (omission)	No engineering criteria were provided for the sediment basin shown on Figure 5-1. As the final discharge point before leaving the facility property, this basin should be installed as a permanent feature, be sized to contain runoff from a 100-year, 24-hour storm event, and should include an engineered (armored) spillway that will eventually discharge through the culvert under railroad grade.	mpb	
16	Pg. 5-5 and Figure 5-1 (omission)	A temporary sediment basin should be installed at the downstream end of Segment 1 for the duration of clean-up. This basin should be designed for a minimum of a 2-year, 24-hour event, or 3,600 cubic feet/acre of contributing area (EPA 2012 Construction General Permit requirements). The watershed for this basin should include all contributing areas between this basin and the basin to be constructed west of the railroad grade.	mpb	
17	Omission	Determine and state whether this project will have coverage under the Barneys Canyon facility UPDES Multi-sector General Permit (MSGP) or will require a separate Construction General Permit (CGP) for surface disturbance exceeding one acre.	mpb	

109.4 – Projected impacts on slope stability, erosion control, air quality, public health and safety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Initial Review
Page 4 of 4
M/035/0002
April 22, 2014

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
18	Addition to NOI	Provide an amendment to the Notice of Intention (NOI) re-evaluating the projected impacts of the Barneys Canyon mine on erosion control, air quality, and public health and safety.	lah	

109.5 - Actions to mitigate any impacts

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
19	Addition to NOI	Provide an amendment to the NOI on Kennecott Barneys Canyon's actions to mitigate sediment and deleterious materials releases which might impact the environment.	lah	

R647-4-110 - Reclamation Plan

110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
20	Omission	Please provide information on the source area for the replacement material, including, at a minimum, the soils and riprap.	lah	

110.5 - Revegetation planting program

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
21	Omission	Provide a seed mix of grasses and forbs and application rate to be planted after excavation and grading	mpb	
22	Omission	Provide a brief description of revegetation methods, including, but not limited to, surface roughening, seed application method, and any post-seeding activity such as harrowing to cover seed with soil.	mpb	
23	Omission	Revegetation program should address reseeding the entire disturbed area, including newly riprapped channels	mpb	